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Feedlot and Carcass Data: Making “Cents” and Making Decisions [presentation]

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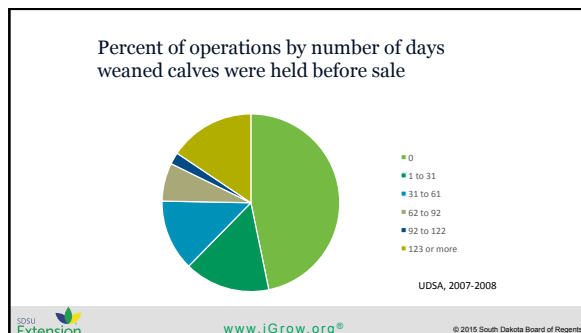
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Feedlot and Carcass Data: Making “Cents” and Making Decisions

Julie Walker, Ph.D.
Beef Extension Specialist

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Pricing of Feeder Calves



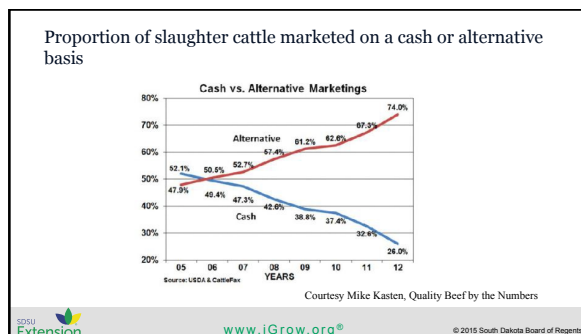
Livestock Video
Auction



Value at Finish Animal – Expenses = Available Price for Feeder Calf

Profit Margin

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Calf Value Discovery

Tri-State Cattle Feeders


Ranch to Rail

Retained Ownership Program

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Program Similarities

- Feedlot Performance
- Carcass Characteristics
- Economics Parameters



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Effect of Region of Origin on Feedlot Performance and Health

Item	Southeast	Midwest
# of Head	31,155	16,371
In wt., lb	649 ^a	629 ^b
Days of age	320 ^a	255 ^b
Final wt., lb	1,174 ^a	1,177 ^b
DOF	167 ^a	174 ^b
Harvest Age, d	488 ^a	430 ^b
Overall ADG, lb	3.18	3.18
Feed to Gain	6.92 ^a	6.76 ^b
Morbidity Rate, %	15.81 ^a	22.11 ^b
Treatment cost, \$/hd	\$5.53 ^a	\$8.49 ^b
Mortality Rate, %	1.35 ^a	1.81 ^b

Busby, 2014



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Item	Southeast	Midwest
# of head	31,155	16,371
HCW, lb	723 ^a	725 ^a
Backfat, in	0.45 ^a	0.44 ^a
REA, sq in	12.33 ^a	12.46 ^b
Calculated Yield Grade	2.86 ^a	2.80 ^a
% Yield Grade 1 & 2	57.28 ^a	62.42 ^b
% Yield Grade 3	40.20 ^a	35.84 ^b
% Yield Grade 4 & 5	2.52 ^a	1.74 ^b
Marbling Score	Small 26	Small 25
% Prime	1.08 ^a	0.80 ^b
% Choice & Choice +	14.94 ^a	14.34 ^b
% CAB	18.43 ^a	16.91 ^b
% Choice-	50.32 ^a	52.93 ^b
% Select	30.99 ^a	29.41 ^b
% Standard	2.68 ^a	2.52 ^b

Busby, 2014



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Item	Southeast	Midwest
# of head	31,155	16,371
Profit, \$/hd	\$37.34 ^a	\$23.79 ^b
% Yield Grade 1 & 2	57.28 ^a	62.42 ^b
% Yield Grade 3	40.20 ^a	35.84 ^b
% Yield Grade 4 & 5	2.52 ^a	1.74 ^b
Marbling Score	Small 26	Small 25
% Prime	1.08 ^a	0.80 ^b
% Choice & Choice +	14.94 ^a	14.34 ^b
% CAB	18.43 ^a	16.91 ^b
% Choice-	50.32 ^a	52.93 ^b
% Select	30.99 ^a	29.41 ^b
% Standard	2.68 ^a	2.52 ^b

Busby, 2014



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Effect of number of times animals treated for disease conditions on performance

	Number of Treatments		
	0	1	≥ 2
ADG, lb/d	3.06 ^a	2.93 ^b	2.87 ^b
Feed to gain	7.11 ^a	7.23 ^b	7.26 ^b
Quality Grade	6.45 ^a	6.65 ^b	6.87 ^c
Prime	1.86%	1.05%	0.93%
Choice	70.27%	62.89%	57.96%
Select	25.28%	30.14%	30.56%
Standard	2.59%	5.92%	10.56%

Quality Grade scale, Prime = 3, Choice+ = 4, Choice- = 5, Select+ = 7, Select- = 8, Standard+ = 9, Standard- = 10

Busby et al., 2004

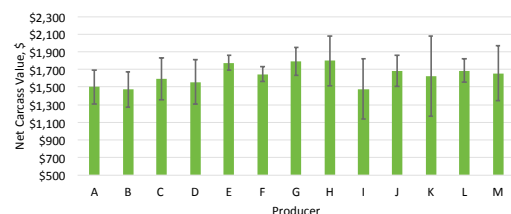


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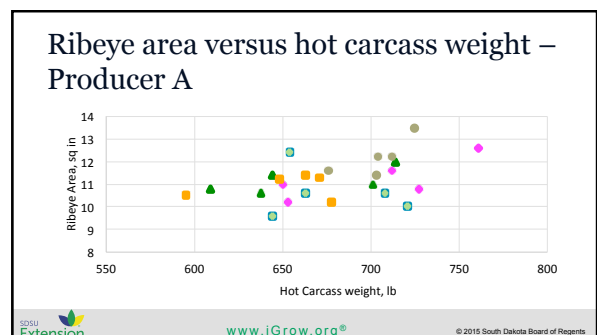
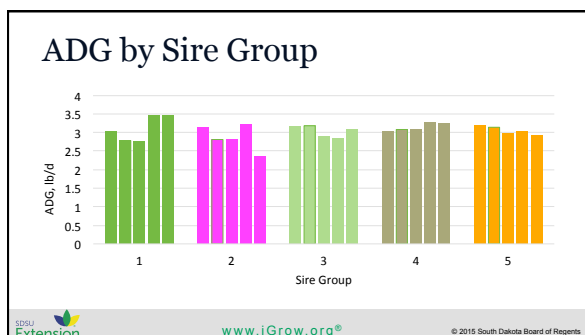
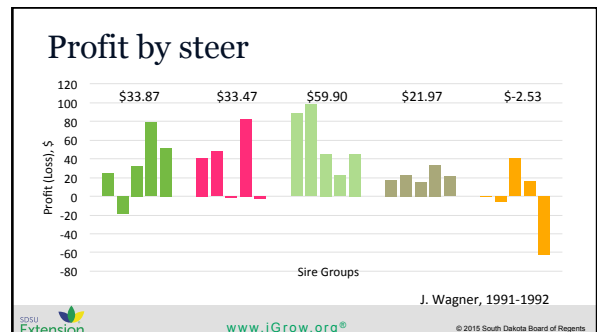
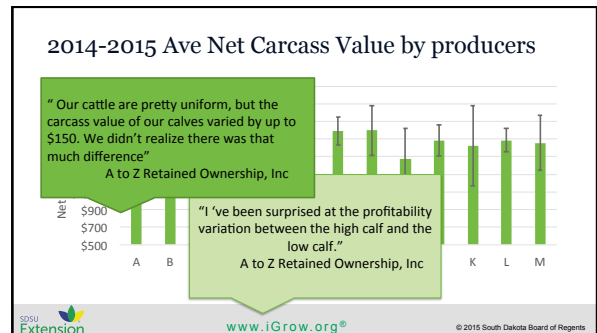
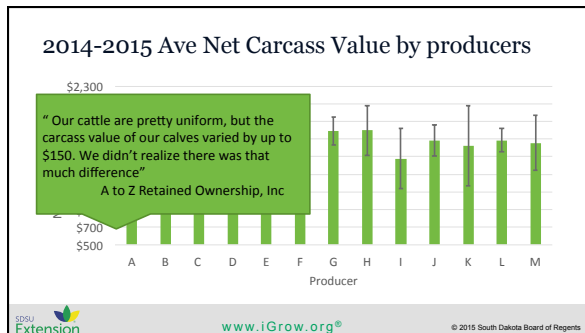


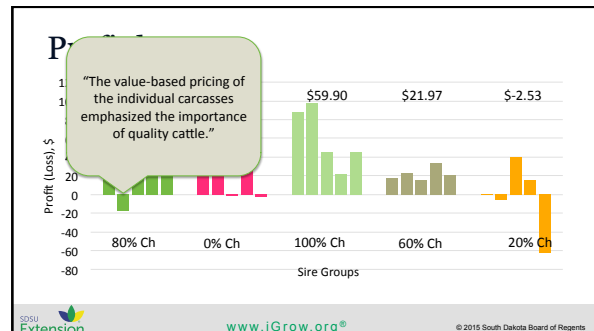
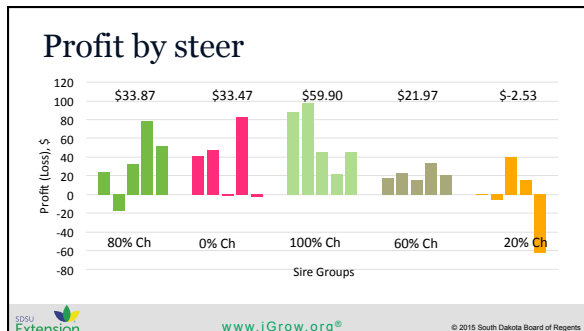
2014-2015 Ave Net Carcass Value by Producers



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Today

Targets:
950 - 980 lb HCW
Prime Carcass
Yield Grade 3

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USDA carcass grade traits from National Beef Quality Audit, 2011 & 2005

	2011	2005
USDA Yield Grade	2.9	2.9
USDA Quality Grade	693	690
Adjusted fat thickness, in	0.5	0.5
Hot carcass weight, lb	823	792
Ribeye area, in ²	13.8	13.4
KPH fat, %	2.3	2.3
Marbling score	440	432

NCBA

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Producer X (2012-2013)

In WT, lb	Out WT, lb	DOF	ADG, lb	HCW, lb	Quality Grade	Calc YG	REA, in ²	BF, in	Feeding Profit, \$	
638	1220	190	2.94	740	Choice	4.07	10.91	0.60	\$836.66	CAB
554	1240	190	3.47	760	Choice	4.14	11.73	0.73	\$873.52	CAB
584	1206	204	2.93	735	Choice	2.51	12.65	0.35	\$799.02	
676	1372	190	3.52	865	Choice	3.45	13.58	0.62	\$1,189.38	CAB
624	1254	217	3.02	751	Choice	2.92	11.65	0.32	\$794.42	
504	1100	204	2.80	642	Select	2.64	10.78	0.32	\$616.41	
588	1282	190	3.51	782	Choice	3.49	12.00	0.55	\$1,020.06	CAB
738	1460	190	3.65	915	Choice	3.38	14.43	0.54	\$1,294.84	CAB
584	1230	217	3.08	759	Select	2.34	13.62	0.37	\$731.36	
578	1220	190	3.24	735	Choice	3.72	10.74	0.57	\$898.14	

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Producer X (2012-2013)

In WT, lb	Out WT, lb	DOF	ADG, lb	HCW, lb	Quality Grade	Calc YG	REA, in ²	BF, in	Feeding Profit, \$	
638	1220	190	2.94	740	Choice	4.07	10.91	0.60	\$836.66	CAB
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Producer X (2012-2013)

In WT, lb	Out WT, lb	DOF	ADG, lb	HCW, lb	REA, in ²	BF, in	Feeding Profit, \$	
638	1220	190	2.80	768	12.20	0.55	\$836.66	CAB
554	1240	190	3.08	759	13.62	0.37	\$873.52	CAB
584	1206	204	3.72	735	10.74	0.57	\$799.02	
676	1372	190	3.65	915	14.43	0.54	\$1,189.38	CAB
624	1254	217	3.08	759	13.62	0.37	\$794.42	
504	1100	204	2.80	768	12.20	0.55	\$616.41	
588	1282	190	3.51	780	12.00	0.55	\$1,020.06	CAB
738	1460	190	3.65	915	14.43	0.54	\$1,294.84	CAB
584	1230	217	3.08	759	13.62	0.37	\$731.36	
578	1220	190	3.24	735	10.74	0.57	\$898.14	

Select bulls with more muscling.

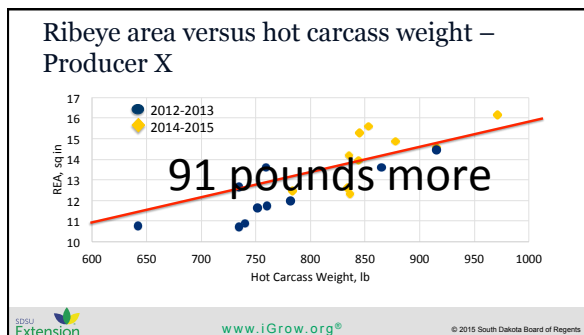
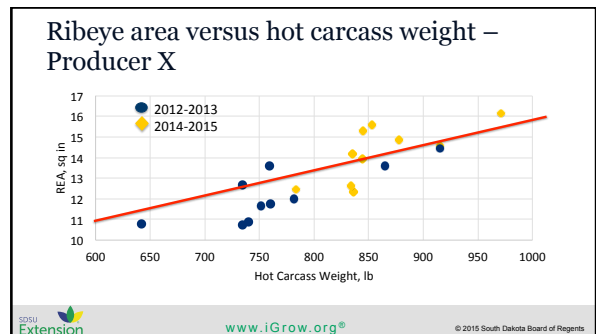
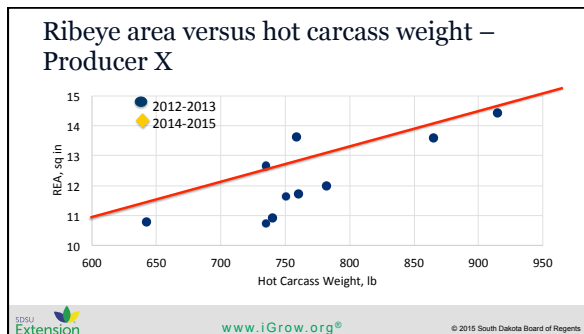
Producer X

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Estimated of Ribeye area by carcass weight

Carcass Weight (lb)	Ribeye Area, in ²
500	9.8
550	10.4
600	11.0
650	11.6
700	12.2
750	12.8
800	13.4
850	14.0
900	14.6

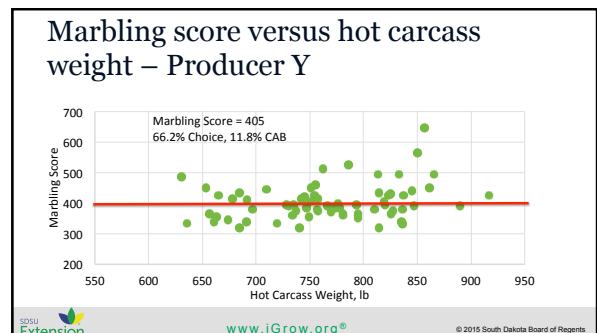
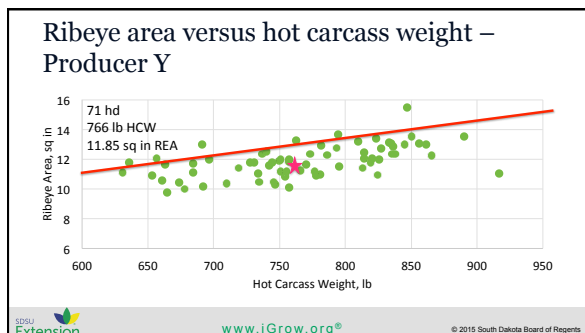
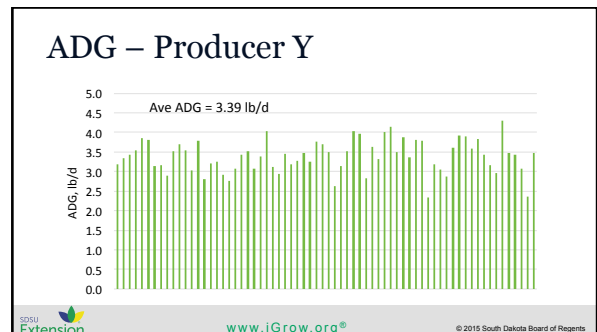
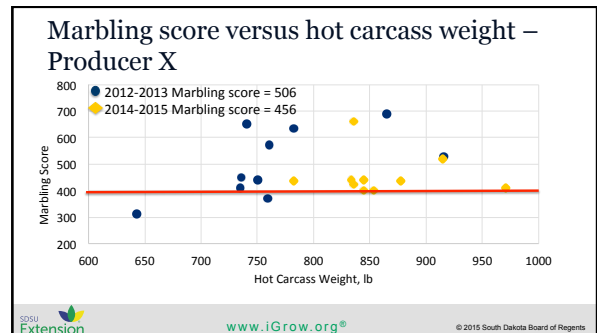
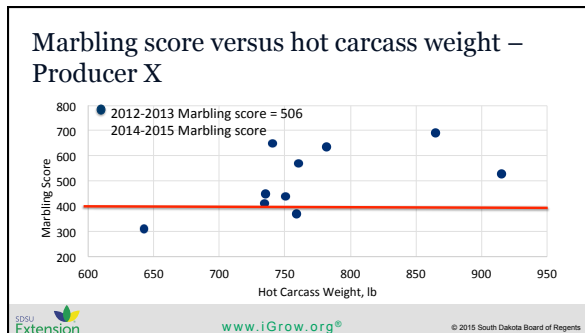
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Producer X

Year	In WT, lb	Out WT, lb	DOF	ADG, lb/d	HCW, lb	REA, in ²	QG	YG
2013	607	1250	198	3.2	768	12.2	80% Ch	2.8
2014	731	1368	193	3.2	846	12.1	90% Ch	3.2
2015	756	1388	182	3.1	859	14.2	80% Ch	2.7

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Producer Y

What's next??

- A. Increase carcass weight
- B. Improved Quality grade
- C. Higher ADG
- D. ??

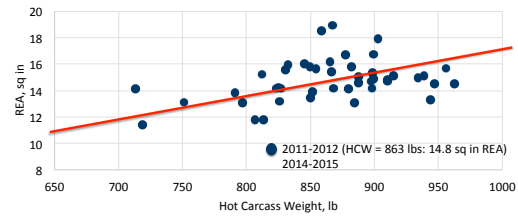


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Ribeye area versus hot carcass weight – Producer Z

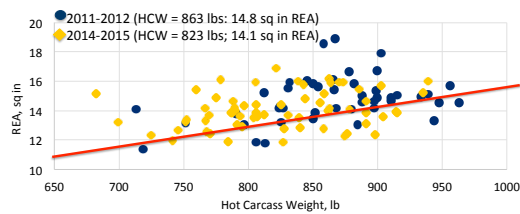


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Ribeye area versus hot carcass weight – Producer Z

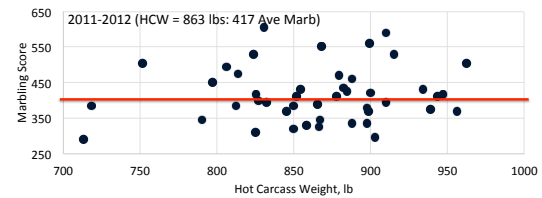


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Marbling score versus hot carcass weight – Producer Z

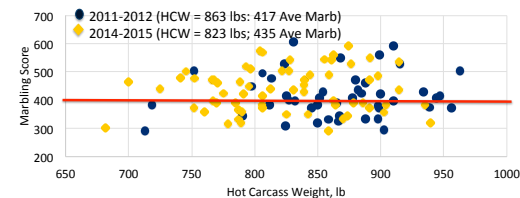


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Marbling score versus hot carcass weight – Producer Z



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Producer Z

Year	In Wt., lb	End Wt., lb	DOF	ADG, lb/d	HCW, lb	REA, in ²	Ribfat, in	QG	YG
2012	666	1,387	203	3.4	863	14.8	0.40	60% Ch	2.0
2013	612	1,327	199	3.5	801	13.8	0.35	57% Ch	2.4
2014	650	1,344	210	3.2	820	13.5	0.32	65% Ch	2.5
2015	645	1,341	197	2.9	823	14.1	0.40	66% Ch	2.6

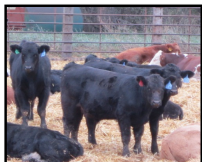
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What management decisions were made with the Cow/Calf Enterprise

- Changing cow size
 - Increasing vs Decreasing
- Selling bulls
 - More vs Less
- Sire selection based on quality grade



What makes money

- Fast growing animals
- Heavy carcasses
- High quality carcasses



Summary

- Baseline of calves
- Management decision within the cow herd impacts performance within the feedlot and carcass characteristics
- Pre- and post- weaning performance is important in making management decisions